

**What Is Claimed Is:**

1. A mast lighting system, comprising:
  - a. a foundation, a portion of the foundation having a generally planar surface that defines an aperture for a conduit therein;
  - b. a tubular mast having a proximate end and a spaced distal end, a portion of the mast being constructed and arranged to support an electrical component, said the proximate end being mounted to the surface of the foundation in overlying registration with the aperture and defining an interior chamber therein;
  - c. a power distribution assembly comprising:
    - i. a casing defining a plurality of openings therein, the casing having a bottom portion, the plurality of openings including a first opening and a second opening, the second opening being defined in the bottom portion of the casing; and
    - ii. a distribution component subassembly disposed within an interior of the casing, the distribution component subassembly having a first detachable connector connected to the first opening, wherein the casing is disposed within the interior chamber of the mast and is placed on the generally planar surface of the foundation such that the second opening of the casing is in registration with the conduit;
  - d. a power source; and
  - e. a first electrical cable disposed within the mast and in communication with the electrical component thereof and a second detachable connector; and
  - f. a second electrical cable in communication with the power source and the distribution component subassembly,  
wherein the first detachable connector is detachable mated to the second detachable connector.
2. The mast lighting system of Claim 1, wherein the power distribution assembly is substantially moisture proof.

3. The mast lighting system of Claim 2, wherein a portion of the second electrical cable extends therethrough at least a portion of the conduit, the aperture, and the second opening in the bottom portion of the casing.
4. The mast lighting system of Claim 3, wherein the second opening of the casing is sealed about the portion of the second electrical cable passing.
5. The mast lighting system of Claim 2, wherein the first detachable connector is constructed and arranged to form a substantially moisture proof connection to the first opening in the casing.
6. The mast lighting system of Claim 1, wherein the first detachable connector comprises a male plug.
7. The mast lighting system of Claim 1, wherein the first detachable connector comprises a female socket.
8. The mast lighting system of Claim 1, wherein the first detachable connector and the second detachable connector are each constructed and arranged for disconnecting in response to an application of a force that is less than the force necessary to damage the first detachable connector.
9. The mast lighting system of Claim 1, wherein the first detachable connector and the second detachable connector are each constructed and arranged for disconnecting in response to an application of a force that is less than the force necessary to damage any one of the electrical cable, the first detachable connector, or the distribution component subassembly.

10. The mast lighting system of Claim 1, wherein the casing has a side wall and the bottom portion of the casing defines a plane, and wherein the casing has at least one flange extending from the side wall of the casing substantially co-planar to the plane of the bottom portion of the casing.
11. The mast lighting system of Claim 10, wherein the at least one flange has a bore extending therethrough.
12. The mast lighting system of Claim 11, further comprising at least one fastener, each fastener being constructed and arranged for passing through the bore of the flange and into the foundation.
13. The mast lighting system of Claim 3, wherein the conduit has an interior bore, further comprising a tubular male protrusion connected to and extending from the second opening in the bottom portion of the casing, wherein a portion of the second electrical cable passes therethrough the male protrusion, the male protrusion extending into the interior bore of the conduit of the foundation.
14. The mast lighting system of Claim 13, wherein the male protrusion extends substantially transverse to the bottom portion of the casing.
15. The mast lighting system of Claim 13, wherein the male protrusion is constructed and arranged for overlying registration with a portion of an interior surface of the conduit of the foundation.
16. The mast lighting system of Claim 13, wherein the male protrusion has a longitudinal length extending from the bottom portion of the casing that is greater than about the length of a radius of the interior bore of the conduit.

17. The mast lighting system of Claim 13, wherein the male protrusion has a longitudinal length extending from the bottom portion of the casing that is at least about 150% of the length of a radius of the interior bore of the conduit.

18. The mast lighting system of Claim 13, wherein the male protrusion has a longitudinal length extending from the bottom portion of the casing that is about and between about approximately 1/2 inch to 48 inches.

19. The mast lighting system of Claim 13, wherein the male protrusion has a longitudinal length extending from the bottom portion of the casing that is about at least 1/2 inch.

20. The mast lighting system of Claim 13, wherein the male protrusion comprises a first tube and a second tube, wherein the first tube is constructed and arranged to form a substantially moisture proof connection to the second opening of the casing, and wherein the second tube is coupled to a portion of a distal end of the first tube.

21. The mast lighting system of Claim 20, wherein the first tube and the second tube are substantially co-axial.

22. The mast lighting system of Claim 1, wherein the conduit has a spaced distal end, and further comprises a wire restraint member constructed and arranged for connection to a portion of the second electrical cable passing through the distal end of the conduit, wherein the wire restraint member has a diameter greater than a diameter of the distal end of the conduit.

23. The mast lighting system of Claim 1, wherein the power distribution assembly further comprises at least one fuse port connected to one opening in the plurality of openings in the casing, each fuse port defining a fuse cavity constructed and arranged

for operative receipt of a fuse, and having a cap member constructed and arranged to releaseably enclose the fuse within the fuse cavity and to selectively form a substantially moisture proof connection to the opening in the casing, wherein each fuse port is in communication with the distribution component subassembly.

24. A mast lighting system, comprising:

- a. a foundation defining an aperture for a conduit therein, the conduit having an interior bore;
- b. a tubular mast having a proximate end and a spaced distal end, a portion of the mast being constructed and arranged to support an electrical component, the proximate end being mounted to the foundation in registration with the aperture and defining an interior chamber therein;
- c. a power distribution assembly comprising:
  - i. a casing defining a plurality of openings therein, the casing having a bottom portion, the plurality of openings including a first opening and a second opening, the second opening being defined in the bottom portion of the casing;
  - ii. a tubular male protrusion connected to and extending from the second opening in the bottom portion of the casing; and
  - ii. a distribution component subassembly disposed within the casing, the distribution component subassembly having a first detachable connector connected to the first opening, wherein the casing is disposed within the interior chamber of the mast and is placed on the foundation such that the male protrusion extends into the interior bore of the cavity of the foundation;
- d. a power source; and
- e. a first electrical cable disposed within the mast and in communication with the electrical component and a second detachable connector; and
- f. a second electrical cable in communication with the power source and the distribution component subassembly,

wherein the first detachable connector is detachable mated to the second detachable connector.

25. The mast lighting system of Claim 24, wherein a portion of the second electrical cable extends therethrough at least a portion of the conduit, the male protrusion, and the second opening in the bottom portion of the casing.

26. The mast lighting system of Claim 25, wherein the second opening of the casing is sealed about the portion of the second electrical cable passing therethrough.

27. The mast lighting system of Claim 24, wherein the first detachable connector is constructed and arranged to form a substantially moisture proof connection to the first opening in the casing.

28. The mast lighting system of Claim 24, wherein the male protrusion extends substantially transverse to the bottom portion of the casing.

29. The mast lighting system of Claim 24, wherein the male protrusion being constructed and arranged for overlying registration with a portion of an interior surface of the conduit of the foundation.

30. The mast lighting system of Claim 24, wherein the male protrusion has a longitudinal length extending from the bottom portion of the casing that is greater than about the length of a radius of the interior bore of the conduit.

31. The mast lighting system of Claim 24, wherein the male protrusion has a longitudinal length extending from the bottom portion of the casing that is at least about 150% of the length of a radius of the interior bore of the conduit.

32. The mast lighting system of Claim 24, wherein the male protrusion has a longitudinal length extending from the bottom portion of the casing that is about and between about approximately 1/2 inch to 48 inches.

33. The mast lighting system of Claim 24, wherein the male protrusion has a longitudinal length extending from the bottom portion of the casing that is at least 1/2 inch.

34. The mast lighting system of Claim 24, wherein the male protrusion comprises a first tube and a second tube, wherein the first tube is constructed and arranged to form a substantially moisture proof connection to the second opening of the casing, and wherein the second tube is coupled to a portion of a distal end of the first tube.

35. The mast lighting system of Claim 34, wherein the first tube and the second tube are substantially co-axial.

36. The mast lighting system of Claim 24, wherein the first detachable connector and the second detachable connector are each constructed and arranged for disconnecting in response to an application of a force that is less than the force necessary to damage any one of the electrical cable, the first detachable connector, or the distribution component subassembly.

37. The mast lighting system of Claim 24, wherein the power distribution assembly further comprises at least one fuse port connected to one opening in the plurality of openings in the casing, each fuse port defining a fuse cavity constructed and arranged for operative receipt of a fuse, and having a cap member constructed and arranged to releaseably enclose the fuse within the fuse cavity and to selectively form a substantially moisture proof connection to the opening in the casing, wherein each fuse port is in communication with the distribution component subassembly.

38. A power distribution assembly for a mast lighting system having a power source, comprising:

a casing defining a plurality of openings therein, the plurality of openings including a first opening and a second opening, the first opening defined in an upper portion of the casing and the second opening defined in a bottom portion of the casing; and

a distribution component subassembly disposed within of the casing, the distribution component subassembly having a first detachable connector being constructed and arranged to form a substantially moisture proof connection to the first opening; and

an electrical cable in communication with the distribution component subassembly and the power source, a portion of the electrical cable passing therethrough the second opening, wherein the second opening of the casing is sealed to the portion of the electrical cable so that the casing of the power distribution assembly is substantially moisture proof.

39. The power distribution assembly of Claim 38, wherein the first detachable connector comprises a male plug.

40. The power distribution assembly of Claim 38, wherein the first detachable connector comprises a female socket.

41. The power distribution assembly of Claim 38, wherein the first detachable connector is constructed and arranged for disconnecting in response to an application of a force that is less than the force necessary to damage any one of the first detachable connector or the distribution component subassembly.

42. The power distribution assembly of Claim 38, wherein the bottom portion of the casing is substantially planar.

43. The power distribution assembly of Claim 42, wherein the casing has a side wall, and wherein the casing has at least one flange extending from the side wall of the casing substantially co-planar to the bottom portion of the casing.

44. The power distribution assembly of Claim 43, wherein the at least one flange has a bore extending therethrough.

45. The power distribution assembly of Claim 38, further comprising a tubular male protrusion connected to and extending from the second opening in the bottom portion of the casing, wherein a portion of the electrical cable passes through the male protrusion.

46. The power distribution assembly of Claim 45, wherein the male protrusion extends substantially transverse to the bottom portion of the casing.

47. The power distribution assembly of Claim 45, wherein the male protrusion has a longitudinal length extending from the bottom portion of the casing that is about and between about approximately 1 inch to 24 inches.

48. The power distribution assembly of Claim 45, wherein the male protrusion has a longitudinal length extending from the bottom portion of the casing that is at least one inch.

49. The power distribution assembly of Claim 45, wherein the male protrusion comprises a first tube and a second tube, wherein the first tube is constructed and arranged to form a substantially moisture proof connection to the second opening of

the casing, and wherein the second tube is coupled to a portion of a distal end of the first tube.

50. The power distribution assembly of Claim 49, wherein the first tube and the second tube are substantially co-axial.

51. The power distribution assembly of Claim 38, further comprising at least one fuse port connected to one opening in the plurality of openings in the casing, each fuse port defining a fuse cavity constructed and arranged for operative receipt of a fuse, and having a cap member constructed and arranged to releaseably enclose the fuse within the fuse cavity and to selectively form a substantially moisture proof connection to the opening in the casing, wherein the fuse port is in communication with the distribution component subassembly.

52. The power distribution assembly of Claim 51, wherein each fuse port is positioned on a portion of the upper portion of the casing.

53. A power distribution assembly for a mast lighting system having a power source, comprising:

- a casing defining a plurality of openings therein, the plurality of openings including a first opening and a second opening, the first opening defined in an upper portion of the casing and the second opening defined in a bottom portion of the casing;

- a tubular male protrusion connected to and extending from the second opening in the bottom portion of the casing;

- a distribution component subassembly disposed within the casing, the distribution component subassembly having a first detachable connector constructed and arranged to form a substantially moisture proof connection to the first opening; and

an electrical cable in communication with the distribution component subassembly and the power source, a portion of the electrical cable passing through the male protrusion and the second opening, wherein the second opening of the casing is sealed to the portion of the electrical cable so that the casing of the power distribution assembly is substantially moisture proof.

54. The power distribution assembly of Claim 53, wherein the first detachable connector is constructed and arranged for disconnecting in response to an application of a force that is less than the force necessary to damage any one of the first detachable connector or the distribution component subassembly.

55. The power distribution assembly of Claim 53, wherein the male protrusion has a longitudinal length extending from the bottom portion of the casing that is at least 1/2 inch.

56. The power distribution assembly of Claim 53, wherein the male protrusion comprises a first tube and a second tube, wherein the first tube is constructed and arranged to form a substantially moisture proof connection to the second opening of the casing, and wherein the second tube is coupled to a portion of a distal end of the first tube.

57. The power distribution assembly of Claim 56, wherein the first tube and the second tube are substantially co-axial.

58. A method of constructing a mast lighting system of the type including at least one tubular mast having a proximate end, a spaced distal end and defining an interior chamber, a portion of the mast constructed and arranged to support an electrical component and the proximate end mounted to a foundation that defines a conduit

extending into the ground, a first electrical cable in communication with the electrical component and a second detachable connector, comprising:

- a. disposing a power distribution assembly onto the foundation and within the interior chamber of the mast, the power distribution assembly comprising:
  - i. a casing defining a first opening in an upper portion of the casing and a second opening in a bottom portion of the casing, the casing positioned onto the foundation such that the second opening is in overlying registration with the conduit;
  - ii. a tubular male protrusion connected to and extending from the second opening in the bottom portion of the casing; and
  - iii. a distribution component subassembly disposed within an interior of the casing, the distribution component subassembly having a first detachable connector connected to the first opening of the casing;
- b. mating the first detachable connector to the second detachable connector so that the electrical component is in communication with the distribution component subassembly; and
- c. connecting the distribution component subassembly to a power source, wherein the power distribution assembly is disposed onto the foundation so that the male protrusion is disposed at least partially therein the conduit of the foundation..

59. The method of Claim 58, wherein the power distribution assembly has a second electrical cable that is connected to the distribution subassembly, wherein the second electrical cable extends therethrough the male protrusion and the second opening.

60. The method of Claim 59, wherein connecting the distribution component subassembly includes connecting the second electrical cable to the power source.

61. The method of Claim 60, wherein, prior to disposing the power distribution assembly, further comprising sealing the second opening about a portion of the second electrical cable to form a substantially moisture proof seal.